SEMICONDUCTOR

SR10100L,SRF10100L(SINGLE CHIP)

LOW VF SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 100 Volts
Forward Current - 10.0Amperes

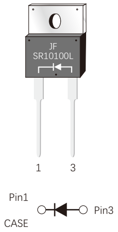
FEATURES

- Power pack
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,low forward voltage drop
- High forward surge capability
- High frequency operation
- Solder dip 275℃ maximum,10s,per JESD22-B106
- Component in accordance to RoHS 2015/863/EU

Pb RoHS COMPLIANT

TO-220AC

SR10100L



ITO-220AC

SRF10100L

MECHANICAL DATA

- Case: JEDEC TO-220AC、ITO-220AC
- Molding compound meets UL94V-0 flammability rating
- Terminals: Lead solderable per J-STD-002 and JESD22-B102
- Polarity: As marked
- Mounting Torque: 10 in-Ibs maximum

PRIMARY CHARACTERISTICS	
IF(AV)	10A
VRRM	100V
IFSM	150A
VF at IF=10.0A(125℃)	0.63V
IR	20μA
TJ(MAX)	150℃
Package	TO-220AC,ITO-220AC
Diode variations	Single

TYPICAL APPLICATIONS

For use in low voltage ,high frequency inverters ,DC/DC converters, free wheeling ,and polarity protection applications

MAXIMUM RATINGS

(Ratings at 25℃ ambient temperature unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum average forward rectified current (see fig.1)	$I_{F(AV)}$	10.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	I_{FSM}	150	A
Peak repetitive reverse current per diode at tp=2μs 1KHz	I_{RRM}	0.5	A
Operating junction and Storage temperature range	T_J ,T_{stg}	-55 to+150	℃
Isolation voltage(ITO-220AB only)from terminals to heatsink t=1 min	V_{AC}	1500	V

RATINGS AND CHARACTERISTIC OF SR10100L,SRF10100L

ELECTRICAL CHARACTERISTCS （T_A=25℃ Unless otherwise noted)

Parameter	Test Conditions		Symbol	TYP.	MAX.	Unit
Instaneous forward voltage	I_F=10.0A	T_j=25℃	V_F 1)	0.66	0.70	V
		T_j=100℃		0.64	–	
		T_j=125℃		0.63	–	
	I_F=5.0A	T_j=25℃		0.53	0.57	
		T_j=100℃		0.51	–	
		T_j=125℃		0.50	–	
Reverse current	VR=100V	T_j=25℃	I_R 2)	20	50	µA
		T_j=100℃		2	5	mA
		T_j=125℃		10	20	
Typical junction capacitance	4V,1MHz		C_J	750		pF

Notes: 1.Pulse test: 300 µs pulse width,1% duty cycle

2.Pulse test: pulse width≤40ms

THERMAL CHARACTERISTCS

Parameter	Symbol	SR10100L	SRF10100L	Unit
Typical thermal resistance 3)	$R_{\theta JC}$	2.5	4.5	℃/W

3.Thermal resistance from junction to case

AVAILABALE PACK INFORMATION

Product code	Pack	Carton Size L×W×H(mm)	Inner Box Size L×W×H(mm)	Tube Length (mm)	Inner Box Number	Tube Number Per A Inner Box	Part Number Per A Tube	Quantity(carton) (K)
SR10100LCT TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5
SRF10100LCT TO-220AB	Tube	565×225×170	548×151×37	540	5	20	50	5

RATINGS AND CHARACTERISTIC OF SR10100L,SRF10100L

FIG.1-FORWARD CURRENT DERATING CURVE

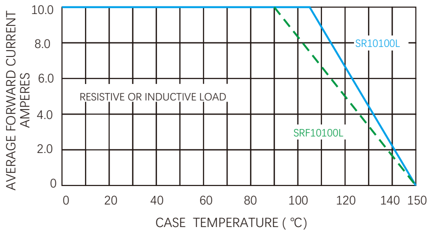


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

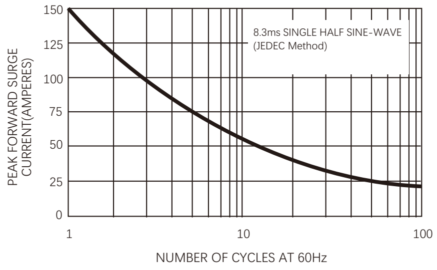


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

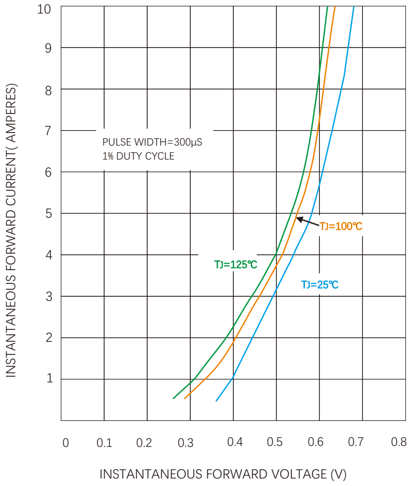


FIG.4-TYPICAL REVERSE CHARACTERISTICS

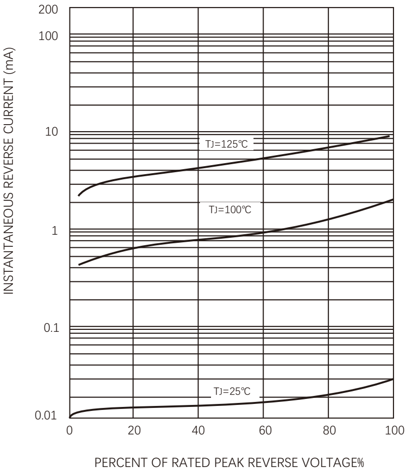
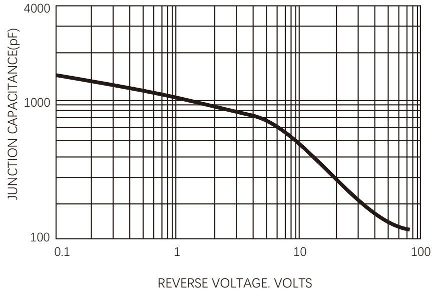


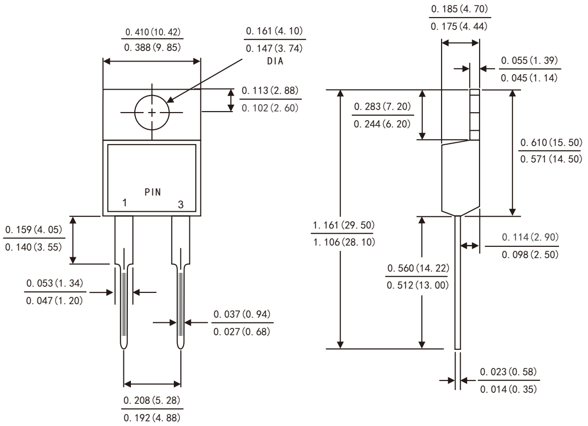
FIG.5-TYPICAL JUNCTION CAPACITANCE



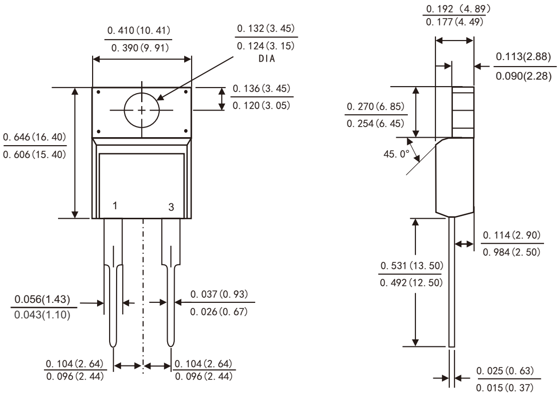
PACKAGE OUTLINE DIMENSIONS

Dimensions in inches and (millimeters)

TO-220AC



ITO-220AC



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